

LAJOS L.

Excerpta Medica 8/7 sec 3 July 54 Endocrinology

1272. LAJOS L. and SZONTÁGH F. Pécsi Orvostud. Egyet. Szülész. és Nögyő-Klin., Pécs. \*A gonadotrop hormon szerepe a histaminés anaphylaktikus shock elhárításában. Rôle of gonadotrophin in the prevention of histamine and anaphylactic shock KISÉRL. ORVOSTUD. 1953, 5/2 (107-111) Graphs 3 Tables 1 Illus. 2

Gonadotrophin has a protective effect against histamine and anaphylactic shock in guinea-pigs. The mechanism of action is studied and it is suggested that gonadotrophin stimulates the reticular zone of the adrenal gland (17-ketosteroid excretion was increased). It is postulated from the experiments that there exists in the hypophyso-adrenal system, besides ACTH-cortisone, another regulating mechanism, and that gonadotrophin has further effects in addition to its gonad-stimulating action.

Tigyi - Pécs

Excerpta Medica 8/7 sec 3 July 54 Endocrinology

1270. LAJOS L., SZONTÁGH F., PÁLI K., GÖRIS J. and BACSA A. Frauenklin., [REDACTED], Pécs, Hungary. "Die gonadotrope Aktivität der Adenohypophyse in normaler und pathologischer Schwangerschaft. The gonadotropic activity of the anterior hypophysis in normal and pathological pregnancy ENDOKRINOLOGIE 1953, 30/3-4 (138-146) Graphs 2 Illus. 3

Gonadotrophin excreted in the urine during the first 3 months of pregnancy was demonstrated partially to be of hypophyseal origin. Use was made of an observation made by Evans et al., who found that the ovarian weight of infantile female rats was increased by hypophyseal gonadotrophic hormone but not by chorionic gonadotrophic hormone. The hypophysis does not become inactive until the 4th month of pregnancy. The raised gonadotrophin level found as a rule in cases of toxæmia of pregnancy should be attributed to increased hypophyseal activity. These findings were verified by means of Hasenbein's earth-worm test.

Louwerens - Amsterdam (III, 10)

**LAJOS, L.;SZONTAGH, F.**

New possibilities in the therapeutic use of gonadotropins; preliminary report. Orv. hetil. 94 no.8:213 22 Feb 1953. (CLML 24:3)

1. Doctors. 2. Obstetric and Gynecological Clinic (Director -- Prof. Dr. Laszlo Lajos), Pecs Medical University.

LAJOS, L.; PALI, K.; SZONTAGH, F.; GATI, I.; HUSVET, F.; CSABA, I.; HALVAX, L.

Improvement of results of abdominal operations with the utilization  
of recent pathophysiological knowledges. Orv. hetil. 94 no.13:348-  
351 29 Mar 1953. (CLML 24:4)

1. Doctors. 2. Obstetric and Gynecological Clinic (Director -- Prof.  
Dr. Laszlo Lajos), Pecs Medical University.

SZONTAGH, F.; LAJOS, L.

Investigation on polysaccharides in blood proteins in toxemia.  
Orv. hetil. 94 no.19:517-518 10 May 1953. (CML 25:1)

1. Doctors. 2. Obstetric and Gynecological Clinic (Director -- Prof. Dr. Laszlo Lajos), Pecs Medical University.

LAJOS, Laszlo; NAGY, Dezso; GATI, Istvan

Biological activity of components isolated from pregnant urine.  
Magy.nocrv.lap. 18 no.1:8-16 Jan 55

1. A Pecsi Orvostudomanyi Egyetem Szülestanak Klinikajának  
Közleménye (Igazgató: Lajos László dr. egyet. tanár)  
(PREGNANCY, urine  
biol. activity of isolated components (Hun)  
(URINE,  
biol. activity of components isolated from pregn.  
urine (Hun)

ENCERTA MEDICA Sec 10 Vol.9/8 Obstetrics Aug 56

378. LAJOS L., PÁLI K. and GÖRCS J. Pécsi Orvostud. Egyet. Szülészeti és Nőgyógyászati Klin. közl. \*Terhességi hypophysisek morphológiai és functionális változásai. Morphological and functional changes in the pituitary during pregnancy MAG. NŐORV. LAPJA 1955, 12/4 (194-204) Illus. 11

Kamination of 18 pituitaries of pregnant patients confirmed the theory that during pregnancy groups of hypertrophic cells appear in the hypophysis. The structure of these new cells is similar to that of the so-called amphophilic cells. Histochemical examinations showed in these cells PAS-positive drops and an intensive ribonucleic acid reaction. These findings convinced the authors that these cells have an active function and should not be regarded as a result of degeneration.

~~Lajos László Nagy~~  
KAVUS 645240  
HUNGARY/Human and Animal Physiology - Internal Secretion.

V-7  
*b*

Abs Jour : Ref Zhur - Biol., No 2, 1958, 8920

Author : Laszlo Lajos, Dezso Nagy, Istvan Gati, Antal Bacsa, Gabor Seres, Ivan Clos, Vilmos Zoltan, Ferenc Husvet and Jozsef Adam

Inst Title : New Endocrinological Observations of Pregnant Women

Orig Pub : Orv. hetilap, 1955, 96, No 14, 366-373

Abstract : A gonadotropic substance was isolated from the urine of pregnant women which stimulated spermatogenesis in earthworms and failed to give a positive reaction in frogs. This distinguishes it from the chorionic gonadotropin, which is isolated from the urine along with it. In a normal pregnancy 60-1000 units of the gonadotropic substance are found in a liter of urine or serum, from the second trimester on. When toxemia is present, the concentration of the gonadotropin, even in the early

Card 1/2

LAJOS, Laszlo, dr.,; NAGY, Dezso, dr.,; GATI, Istvan, dr.,; SERES,  
Gabor, dr.

*b*

Determination of the site of production of C (worm-positive) factor. Orv. hetil. 96 no.36:991-994 Sept 55.

1. A Pecsi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati Klinikajának (igazgató: Lajos Laszlo dr. egyetemi tanár) kozlem,  
Orv. hetil. 96 no.36:991-994 4 Sept 55

(URINE,

worm-positive factor in pregn. & chorionic epithelioma  
determ. of site of prod.)

(PREGNANCY, urine in,

worm-positive factor in, determ. of site of prod.)

(GONADOTROPINS, CHORIONIC, in urine,

gonadotropin-like worm-positive factor in pregn. &  
chorionic epithelioma, determ. of site of prod.)

(CHORIOCARCINOMA, urine in,

worm-positive factor, determ. of site of prod.)

Lajos L.

EXCERPTA MEDICA Sec 3 Vol.12/8 Endocrinology Aug 58

1556. THE GONADOTROPHIC ACTIVITY OF THE HUMAN HYPOPHYSIS DURING PREGNANCY - Lajos L., Nagy D., Gáti I., Zoltán V. and Glócs I. Dept. of Gynaecol. and Obstet., Med. Univ., Pécs - ACTA MED. ACAD. SCIENT. HUNG. (Budapest) 1957, 10/4 (363-373)

The authors have isolated a substance, which they have called G factor, from the urine and serum of pregnant women and patients with chorionepithelioma. They consider this substance to be a gonadotrophin distinct from human chorionic gonadotrophin, and point out that it will induce spermogenesis in the earthworm but not sperm release in the frog. Additional studies of placenta, pituitary and serum indicate that this substance appears in the adenohypophysis of pregnant women, after the disappearance of FSH and LH which normally occurs during pregnancy.

Bloodworth - Columbus, O. (III, 10\*)

LAJOS, Laszlo; CSABA, Imre; SANDOR

Regulation of the endocrine function of the placenta.  
Magy. Tudom. Akad. Biol. Orv. Oszt. Kozl. 8 no.1-2:  
131-132 1957.

1. A Pecsi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati  
Klinikaja.

(PLACENTA, physiol.

pituitary regulation of endocrine funct. (Hun))

(PITUITARY GLAND, physiol.

regulation of endocrine funct. of placenta (Hun))

LAJOS, László; CSABA, Imre; DOMANY, Sándor; SZÉKELY, József; BREILLA, István

Experimental studies on the conditions of the secretion of chorionic  
gonadotropins. Kísérleti orvostud 9 no.5-6:554-563 Oct-Dec 58.

1. Péczi Orvostudományi Egyetem Szülészeti és Nőgyógyaszati Klinikája.  
(GONADOTROPINS, CHORIONIC, physiol.  
secretion under various exper. cond. in vitro (Hun))

CSABA IMRE; LAJOS LASZLO; DOMANY SANDOR

Bioassay of choriogonadotropin (HOG) and luteinizing hormone (LH) on frogs. Kiserletes orvostud. 10 no.2-3:195-200 Apr-June 58.

1. Pecsi Orvostudomanyi Egyetem Szegeseti es Nogyogyaszati Klinikaja.  
(GONADOTROPINS, CHORIONIC, determ.  
bioassay on male frogs (Hun))  
(GONADOTROPINS, PITUITARY, determ.  
interstitial cell stimulating hormone, bioassay on male  
frogs (Hun))

*Lajos L.*  
EXCERPTA MEDICA Sec 3 Vol 13/4 Endocrinology Apr 59

775. THE EFFECT OF ANTERIOR PITUITARY EXTRACT OF PREGNANT WOMEN ON THE CHORIONIC GONADOTROPHIN PRODUCTION OF THE PLACENTA IN VITRO - A terhes adenohypophysis hatása a lepény choriongonadotropin termelésére in vitro kísérletekben - Lajos L., Csaba I., Domány S., Székely J. and Breila I. Pécsi Orvostud. Egyet. Szülészeti és Nőgyógyászati Klin., Pécs - KISÉRL. ORVOSTUD. 1958, 10/4(359-371) Graphs 1  
Tables 5

Pituitary extract of pregnant women stimulates the synthesis of chorionic gonadotrophin in the trophoblasts in vitro, while the extract of pituitary of non-pregnant women has no such effect. Some weeks after delivery this effect of pituitary extract is lost.

Goth - Budapest (III. 10\*)

EXCERPTA MEDICA Sec 10 Vol 13/4 Choriotics Apr 60 *h-*

640. GONADOTROPHINS IN PREGNANCY - Lajos L., Nagy D. and  
Gati I. Dept. of Gynaecol. and Obstet., Med. Univ. of Pécs - GYNAECO-  
LOGIA (Basel) 1959, 148/1 (59-68) Tables 1 Illus. 4

Convincing evidence has been presented that human trophoblast causes an elaboration of an anterior pituitary factor which has heretofore eluded detection. It is present in the serum and urine. The marked synergism between this newly discovered principle, labelled 'Factor G', and LH, helps explain the controversy through several decades as to the presence or absence of FSH in the sera of pregnant women. The authors' impressive data suggest a solution to this enigma. The smallest amounts of incompletely removed LH are capable of eliciting the synergism with 'Factor G'. Investigators, failing to completely eliminate LH from the sera of pregnant women, mistakenly attributed ovarian growth in immature rats to the presence of FSH in the injected serum. 'Factor G' by itself has no known gonadal effects. It is a glycoprotein isolated from chorionic gonadotrophin, i.e. LH, by a cation-exchange process. Its assay unit is the minimal quantity of the 'Factor G'-containing urine fraction which elicits a positive earthworm reaction, by a minimal actual sensitivity of the organism to a standard PMS preparation, (Lutocrescin Richter) 20 I. U. PMS.

Rugart - Philadelphia, Pa. (X, 3\*)

EXCERPTA MEDICA Sec 3 Vol 14/2 Endocrinology Feb 60

879, EXPERIMENTAL EXAMINATION OF THE CONDITIONS OF CHORION-GONADOTROPHIN PRODUCTION - Lajos L., Csaba I., Domány A., Székely J. and Breilla I. *Obstet. and Gynaecol. Clin., Med. Univ., Pécs - GYNAECOLOGIA (Basel) 1959, 147/2 (152-164) Graphs 1*

Tables 5

Placenta pieces obtained from abortions in the 2nd to 3rd month were dissected until only trophoblast tissue was left. This tissue was incubated in different media (bicarbonate Krebs-Ringer, normal serum, pregnancy serum, normal blood and pregnancy blood) and in different atmospheres (pure oxygen, nitrogen and air). By means of extraction and biological titration the amounts of chorionic gonadotrophin were determined. The methods of incubation, extraction and titration are described. It appears from the experiments that surviving trophoblast only produces chorionic gonadotrophin when it is incubated in pregnancy serum under anoxic conditions; oxygenation causes decrease of the hormone production. As only pregnancy serum is able to promote the production of placental gonadotrophin, it is assumed that this hormone is produced under the influence of a maternal endocrine factor, the site of production still being unknown.

Cohen - Amsterdam (X, 3)

L H J 9 2

## EXCERPTA MEDICA Sec 3 Vol 14/4 Endocrinology Apr 60

808. UNKNOWN ENDOCRINE PROPERTIES OF THE ADENOHYPOPHYSIS -  
Az adenohypophysis ismeretlen endocrinológiai sajátosságai - Lajos L.  
Pécsi Orvostud. Egyet. Szülészeti és Nögyógyászati Klin. közl., Pécs - ORV.

HETIL. 1959, 100/28 (993-999) Illus. 14

It is proved experimentally that in pregnancy an endocrine interaction exists between adenohypophysis and placenta, insofar as the anterior pituitary influences HCG production by the placenta and the growth of chorionic epithelium. The characteristic changes shown by the adenohypophysis during pregnancy are due to a lasting oestrogen effect. If the non-pregnant patient in the menopause is treated with higher doses of oestrogens for weeks, the adenohypophysis will develop structural and functional changes similar to those seen during pregnancy. The epithelium of the trophoblast, obtained after abortion and implanted into patients suffering from incurable cancer, treated with oestrogens, shows pathological proliferation, just like specimens of placenta implanted into a pregnant subject. It is remarkable that in contrast to the proliferation of the epithelium, the connective tissue elements of villi degenerate. The opinion is expressed that an as yet unidentified 'placentotrophic' agent produced by the adenohypophysis during pregnancy or in response to treatment with oestrogens in non-pregnant adenohypophysis is responsible for the HCG production and for the proliferation of chorionic epithelium in the transplantation experiments.

IAJOS, Laszlo; CSABA, Imre; DOMANY, Sandor; SZEKELY, Jozsef; BRELLA, Istvan

Placental role of the adeno-hypophysis in labor and purperperium.  
Kiserletes Orvostud. 12 no.2:157-164 Ap '60.

1. Pecsi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati  
Klinikaja.

(PITUITARY GLAND ANTERIOR physiol.)  
(PLACENTA physiol.)  
(LABOR physiol.)  
(PUERPERIUM physiol.)

LAJOS, Laszlo; CSABA, Imre; DOMANY, Sandor; SZEKELY, Jozsef; BREILA, Istvan

Morphology and biology of experimental adenohypophysial conditions  
similar to changes caused by pregnancy. Magy. noorv. lap. 25 no.5:  
269-288 S '62.

1. A Pecsi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati  
Klinikajának kozlemenye (Igazgató: Lajos Laszlo dr. egyet. tanár).  
(PITUITARY GLAND ANTERIOR) (ESTROGENS) (PREGNANCY)

LAJOS, László, dr.; ILLÉI, György, dr.; KECSKES, Lajos, dr.; GORCS, Jenő,  
dr.; MÜTSCHLER, Ferenc, dr.; KOBOR József, dr.

Clinical aspects and pathology of hyperestrogenism in advanced age.  
Orv. hétel. 104 no.25:1155-1161 23 Je '63.

l. Pecsi Orvostudományi Egyetem, Szüleszeti és Nogyogyaszati  
Klinika.  
(ESTROGENS) (MENOPAUSE) (ENDOMETRIA HYPERPLASIA)

LAJOS, Laszlo, dr.

Immunological problems in pregnancy. Orv. hetil. 106 no.20:  
913-920 16 My'65.

1. Pecsi Orvostudomanyi Egyetem, Szuleszeti es Nogyogyaszati  
Klinika (igazgato: Lajos, Laszlo, dr.).

GATI, Istvan, dr.; LAJOS, Laszlo, dr.; DOSZPOD, Jozsef, dr.; HISZEK, Nandor, dr.; ARNOLD, Istvan, dr.; BUCS, Gabor, dr.

Changes in maternal mortality at the maternity clinic of Pecs during 40 years with special respect to puerperal fever. Orv. hetil. 106 no.33:1563-1567 15 Ag'65.

1. Pecsi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati Klinika (igazgato: Lajos, Laszlo, dr.).

LAJOS, Pal, foenergetikus

Pipe explosion in a BW-boiler. Cukor 14 no. 5:136-137 My '61.

1. Ercsi Cukorgyar.

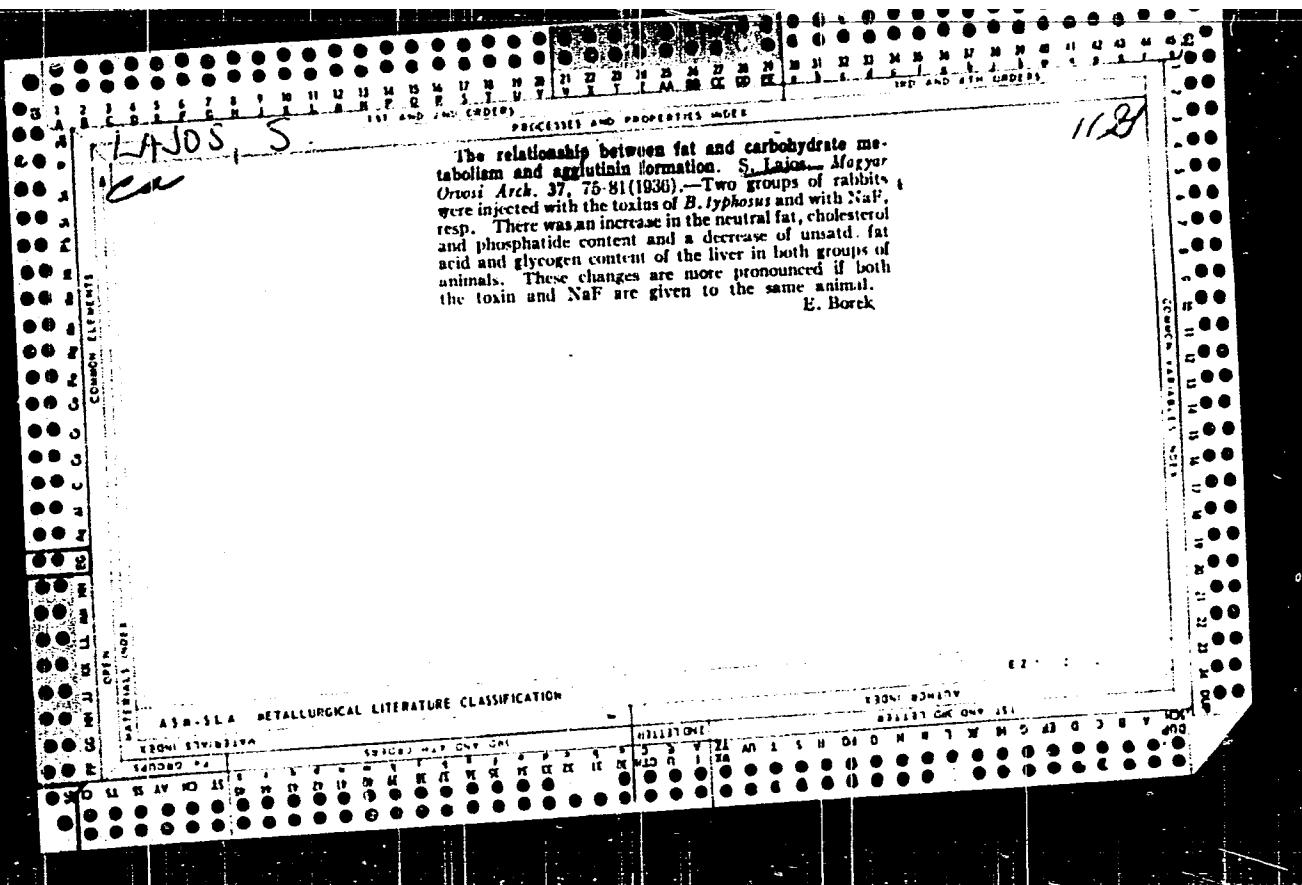
LAJOS, Pal

Lifting BW-boilers. Cukor 15 no. 9:262-263 \$ '62.

1. Ercsi Cukorgyar.

LAJOS S.

**Lipoids in the liver and blood of rabbits in normal and pathological conditions.** Sándor Lajos, Máté Orsi. Arch. 34, 381-401 (1933).—Insulin caused a decrease in neutral fats and an increase in phosphatides, of the liver, and in the blood. Adrenaline produced a decrease in neutral fats of the blood and an increase in phosphatides. Insulin increased the cholesterol while thyroxine produced a decrease. In P poisoning adrenaline caused an initial decrease with a subsequent rise in total fat of the liver but it was not as marked in the diseased animals as in normals. Insulin produced a more marked decrease in the total fat of the pitabol animals. Thyroxine diminished the liver fat and increased cholesterol and phosphatides, but the lipoids of the blood decreased. The posterior lobe of the pituitary caused a slight increase in liver fat with a decrease in blood cholesterol and increase in blood phosphatides. Genital hormones are without effect. Henry Tasber.



DERMATOLOGY

LAJOS S.

✓ D Cline

2287. LAJOS S. Debreceni Orvostud. Egyet. Bor - es Nemikortani Klin. Kozl.\* Adatok a  
psoriasis idegi tenyezoire vonatkozolag. The neurological constituents of  
psoriasis BORGYOGY. VENER. SZLE 1954, 30/1 (10-15)

The most important constituents of the predisposition to psoriasis are represented by neurovascular functional disturbances, which result from pathological corticovascular reflexes. The symptoms of the disease are produced by exogenous and endogenous factors acting on a 'psoriatic constitution'. The damaged nerve impulse causes a parasympathetic effect, the humoral signs of which are an increase of acetylcholine and cholinesterase activity in the skin and blood serum. The increased quantity of lipid substances in the psoriatic papula is, in the author's opinion, also a consequence of the pathological state of the skin. The favourable effect of intravenous procaine, atropine and vit. D can be explained in the same way, and the same is true for the effect of fever, electro-shock, diet and climate.

Nekam - Budapest

SO: EXCERPTA MEDICA: Section XIII, Vol. 8, No. 10

LAJOS, Sandor (Budapest)

Ideal theory of semigroups. Mat kozl MTA 11 no.1:57-66 '61. (HEAI 10:6)

1. Eotvos Lorand Tudomanyegyetem Matematikai Intezete, Budapest.  
(Groups, Theory of) (Ideals (Algebra))  
(Rings (Algebra))

LAJOS, Sandor

Contribution to the ideal theory of semigroups. Pt.2. Mat  
kozl MTA 14 no.3:293-299 '64.

LAJOS, Sandor (Budapest)

Generalized ideals in semigroups. Acta math Szeged 22 no.3/4:  
217-222 '61.

1. Submitted December 24, 1960.

LAJOS, Sandor (Budapest)

A criterion for Neumann regularity of normal semi-groups.  
Acta math Szeged 25 no.1/2:172-173 '64.

1. Submitted October 16, 1963.

LAJTAI,

A  
COUNTRY : Hungary

H-25

CATEGORY :

ABS. JOUR. : AZKhim., No. 1959, No. 73203

AUTHOR : Binder, G.; Lajtai, A.

INST. :

TITLE : Synthesis and Properties of Phosphorescent Plastics. I.

ORIG. PUB. : Magyar tud. akad. Kozp. fiz. kutato int.  
kozl., 1958, 6, No 1-2, 45-55ABSTRACT : 1,4-Di[2-(5-phenyloxazyl)]-benzene (I) and 1,1',4,4'-tetraphenyl-1,3-butadiene (II) are used as organic phosphors. I is synthesized from the acid chloride of terephthalic acid and phenacylammonium chloride, by condensation in the presence of pyridine and subsequent dehydration with  $\text{PCl}_3$ ; II is obtained from  $\text{C}_6\text{H}_5\text{MgBr}$  and succinic anhydride. To vinyl toluene were added 0.5% of benzoyl peroxide, 2% terphenyl, 0.1% I or 0.05% II, and polymerization was effected at 115-135° for 6 days. The phosphorescent polymers thus obtained were studied photometrically and radiometrically. -- L. Pesin.

CARD: 1/1

LAJTAI (Lukovics), Albert.

High-resolution scintillation neutron detectors. Koz fiz kozl MTA 7  
no.5:341-345 '59. (EEAI 9:8)

1. A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete,  
Radiologial Osztaly.  
(Neutrons) (Scintillation counters)

41646  
S/058/62/000/010/035/093  
A061/A101

24 16(50)

AUTHORS: Dési, Sándor, Lajtai, Albert, Nagy, László

TITLE: Time distribution of gamma radiation in U<sup>235</sup> fission

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 50, abstract 10B375  
("Magyar tud. akad. Közp. fiz. kutató int. közl.", 1961, v. 9,  
no. 5 - 6, 283 - 291, III, IX, Hungarian; summaries in Russian and  
English)

TEXT: The time distribution of gamma radiation forming with U<sup>235</sup> fission,  
i.e., emerging from fission fragments, was measured up to some millimicroseconds  
with the aid of a high-resolution time amplitude converter. The time distribu-  
tion of gamma radiation varied as a function of the emission energy; more pre-  
cisely, a greater time lag was obtained with respect to the moment of fission  
in the case of low energies.

[Abstracter's note: Complete translation]

Card 1/1

42957

S/058/62/000/011/011/061  
A062/A101

24 130

AUTHORS: Dési, Sándor, Lajtai, Albert, Nagy, László

TITLE: Velocity distribution of U<sup>235</sup> fission products

PERIODICAL: Referativnyy zhurnal, Fizika, no. 11, 1962, 46, abstract 11B3<sup>46</sup>  
("Magyar tud. akad. Közp. fiz. kutató int. Közl", 1962, v. 10,  
no. 1, 15 - 20, III, IX, Hungarian; summaries in Russian and English)

TEXT: By means of a nanosecond converter, which converts time intervals into pulse amplitudes, and of a multichannel amplitude analyzer, the speed distribution of fission products of U<sup>235</sup> nuclei under the action of slow neutrons was measured. For the groups of heavy and light products, the value of the most probable speeds was found to be equal to  $0.960 \cdot 10^9$  (? probable misprint) and  $1.455 \cdot 10^9$  cm/sec., respectively.

[Abstracter's note: Complete translation]

Card 1/1

37786

S/120/62/000/002/010/047

E039/E520

26.2263

21.4660

AUTHOR: Lajtai, A.

TITLE: A scintillation detector for fast neutrons with a large resolving time

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 53-54

TEXT: A scintillation detector is described which will detect fast neutrons (1-9 MeV) in the presence of a large background of  $\gamma$ -radiation (500 keV) with a resolving time not greater than  $10^{-8}$  sec. Layers of p-terphenyl 2% and POPOP 0.02% in polystyrene were interleaved with layers of perspex 2 mm thick. The decay time of the phosphor is about 2 to  $5 \cdot 10^{-9}$  sec. Secondary electrons are absorbed in the perspex plates and hence do not intercept more than one layer of organic phosphor. Using a Po-Be neutron source and Co<sup>60</sup>  $\gamma$ -source, the optimum thickness for the phosphor film was found to be 0.4 to 0.6 mm. The optimum efficiency was obtained using eight layers of phosphor and eight layers of perspex arranged perpendicular to the window of a photomultiplier. When the efficiency for fast neutron detection is 1% the efficiency for Co<sup>60</sup>  $\gamma$ -radiation is about  $3 \cdot 10^{-4}$  %. The

Card 1/2

A scintillation detector ...

S/120/62/000/002/010/047  
E039/E520

detector is unsuitable for neutrons of energy less than 0.5 MeV.  
The work was carried out at the Ob'yedinennyy institut yadernykh  
issledovaniy (Joint Institute for Nuclear Research).  
There are 2 figures.

ASSOCIATION: Central Research Institute of Physics, Budapest  
SUBMITTED: October 2, 1958 (initially)  
August 4, 1961 (after revision)

Card. 2/2

DESI, Sandor; LAJTAI, Albert; NAGY, Laszlo

Velocity distribution of fission products at the  $U^{235}$  fission. Koz fiz  
kozl 10 no.1:15-20 '62.

LAJTAI, Istvan

"Elements of automatics and telemechanics" by V.M. Sljanyin.  
Reviewed by Istvan Lajtai. Gop 12 no.4:139 Ap '60.

IAJTAI, Istvan

MFM 320 copying milling machine. Gepyartastechn 1 no.5:177-178 Ag  
'61.

LAJTAI, Istvan

"Technology of oscillations" by [Dr.] Adam Bosznay. Reviewed by  
Istvan Lajtai. Gep 14 no.10:364 0 '62.

1. "Gep" szerkeszto bizottsagi tagja.

LAJTAI, Istvan

"Control engineering" by [Dr] Andor Frigyes. Reviewed by Istvan Lajtai. Gep 14 no.9:330 S '62.

1. "Gep" szerkeszto bizottsagi tagja.

FUZI, Erno; LAJTAI, Istvan

Foreign-made machine tools at the Budapest Industry Fair. Gep  
14 no.10:365-376 0 '62.

1. Szerszamgepjegyeszto Intezet (for Fuzi). 2 Csepeli  
Szerszamgepgyar, es "Gep" szerkeszto bizottsagi tagja (for Lajtai).

LAJTAI, Istvan

"Guide for technologists; metal-processing industry" by Bohme,  
Borghardt, Kirberg. Reviewed by Istvan Lajtai. Gep 15 no.7:  
265-266 Jl '63.

1. "Gep" szerkeszto bizottsagi tagja.

LAJTAI, Istvan

The MFM-320 duplicating milling machine of the Csepel Machine  
Tool Factory. Gep 15 no.10:397-400 C '63.

1. "Gep" szerkeszto bizottsagi tagja.

LAJTAI, Istvan

"Maintenance of metal-cutting machine tools" by Raba, Nemeth,  
Kormos. Reviewed by Istvan Lajtai. Gep 16 no.1:16 Ja'64.

1. "Gep" szerkeszto bizottsagi tagja.

LAJTAI, Istvan

"A Nehezipari Muszaki Egyetem Kozlemenyei", vol.8, 1962.  
Reviewed by Istvan Lajtai. Gep 15 no.9:377 S '63.

1. "Gep" szerkeszto bizottsagi tagja.

The industrial production of modified black-heart malleable cast iron [is] described. *Leitai Krenichniye Otdel. Otdel. 5, No. 4 (1954); Izv. Akad. Nauk SSSR, No. 1, p. 19 (1955).* Classical methods of producing black-heart malleable cast iron are melting in a reverberatory furnace and by the direct cupola melting in a cupola furnace and by the direct cupola system, both of which ensure the proper C + Si and Mn/S ratio. The principal difficulties of melting in a cupola furnace is to maintain a low C value and to secure the Si value present to the crit. interval. The object of the modified process is to overcome these obstacles. In this process the brittle basic iron of the black-heart iron is melted in the cupola furnace with the steady maintained 0.6-0.8% content of white-heart malleable castings instead of with the 0.9-1.3% Si content corresponding to the crit. interval. The preset Si content for the white-heart castings is enriched with 75% FeSi up to the Si required for the wall thickness of the black-heart casting to be poured. The advanced state of modification technology ensures that castings of both min. and max. wall thickness will come up without the formation of graphite nodules. The basic requirement for the production of modified black-heart malleable castings is the strict adherence to technical discipline. The practical importance of this method becomes apparent when white-heart as well as black-heart malleable castings must be produced during the same shift in continuous operation. This is due to the fact that there is no need for separate charges and melts for the white and the black fractions, which mean a saving in working time and material. The method of annealing black-heart basic castings melted by the modified process is identical with the universal practice of annealing black-heart malleable castings. The strength and structure of the annealed castings are excellent.

LAJTAI, L.

"Hungarian milling machines." p. 221

GEP. (Gepipari Tudomanyos Egyesulet). Budapest, Hungary.  
Vol. 11, No. 6, June 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959  
Unclu.

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4

LAJTAI, Istvan

"Elements of automatics and telemechanics." by V.M. Sljanyin. Reviewed  
by Istvan Lajtai. Gep 12 no. 4:139 Ap 60.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4"

LAJTAI , Istvan

"Mechanical drawing" by Imre Voros, Reviewed by Istvan Lajtai.  
Gep 13 no.4:138 Ap '61.

1."Gep" szerkeszto bizottsagi tagja.

LAJTAI, Istvan

"Textbook on machinery strength" by Adam Muttnyanszky. Reviewed  
by Istvan Lajtai. Gep 14 no.3:106 Mr '62.

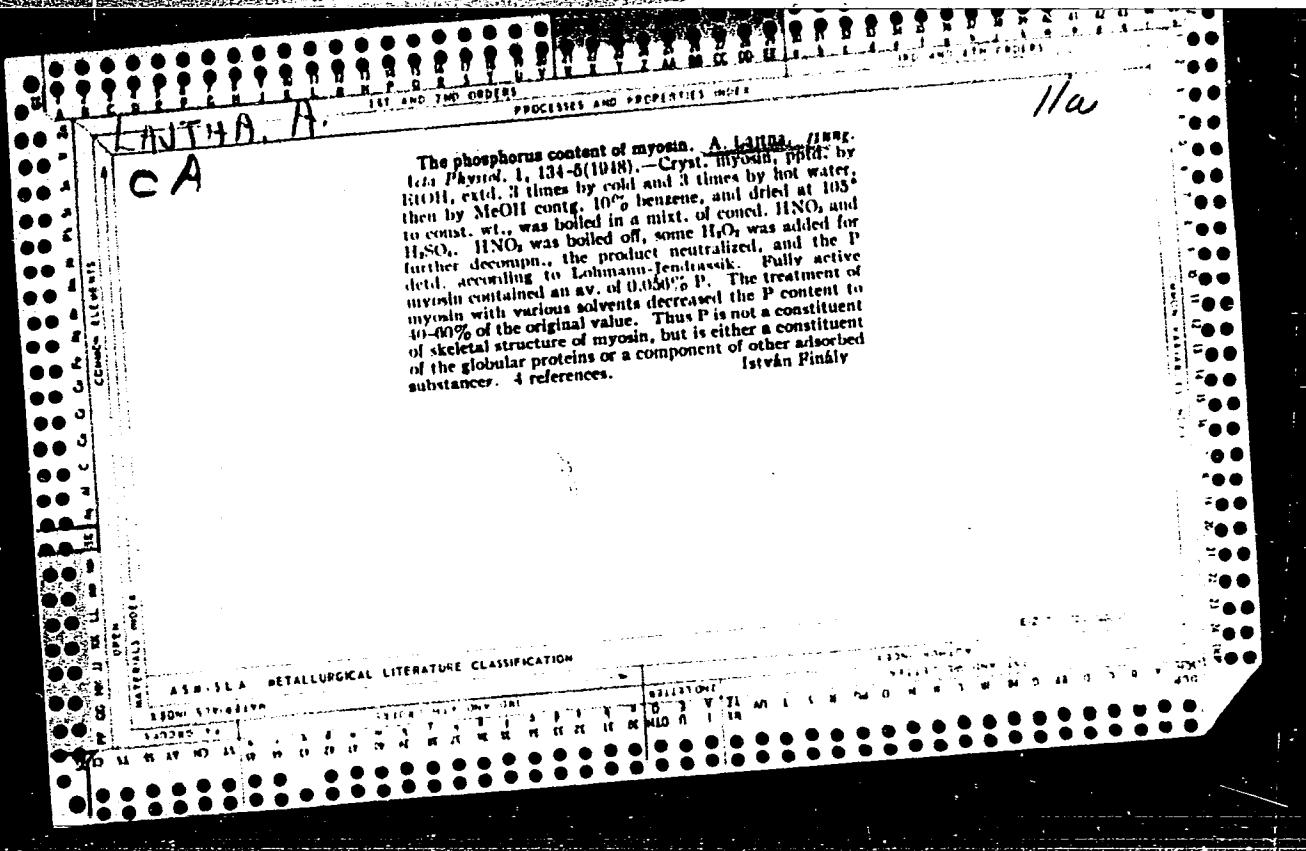
LAJTAI, Istvan

Program control of revolution and feed. Gep 14 no.5:167-170  
My '62.

1. Csepeli Szerszamgepgyar vezeto tervezoso.

LAJTAY, Janos, dr.

Achievements in the manufacture of modified black malleable  
cast iron. Koh lap 9 no. 4: Supplement: Ontode 5 no. 4:  
79-84 Ap '54.



LAJTHA, A.  
(5235)

Univ. of Budapest The muscle proteins of invertebrates. Pubblicazioni della Stazione Zoologica di Napoli 1949, 21/3 (226-231) Tables 5  
The posterior adductor muscle of the lamellibranchs contains myosin and actin. Muscle fibres prepared from these materials and myosin B prepared according to Szent-Gyorgyi contract on addition of adenosine triphosphate in the same manner as similar preparations from rabbit muscle. The adenosine tri-phosphatase activity of Lamellibranch muscle is definitely lower than that of rabbit muscle.

Straub - Szeged

So: Excerpta Medica, Vol. II, No. 10, Sect. II, Oct. 1949

S/194/62/000/008/100/100  
D271/D308

6.9460

AUTHOR: Lajtha, G.

TITLE: Noise problems in multichannel carrier equipment

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 8, 1962, abstract 8-8-22 d (Postakiserl. int. kozl.  
1961, 2, 1-12 [Hung.; summaries in Rus. and Fr.])

TEXT: The distribution of the 10 000 pW noise power allowed by  
CCITT for long distance telephone channels and methods of its mea-  
surement are considered. Addition laws for various types of noise  
are analyzed and permissible noise power in various units of the  
equipment is determined. Results are presented in a table. Methods  
for noise measurement in various types of equipment are presented.  
It is pointed out that the degree of loading of the channels by the  
signal power is substantial for the measurements of noise in carrier  
systems. A generator of voice spectrum has been developed to supply  
loading power, and its design and circuit are given. 10 figures.  
15 references. [Abstracter's note: Complete translation.]

Card 1/1

LAJTHA, Gy.

Carrier frequency equipment for short-distance use. (To be contd.) p. 26.  
MAYGAR HIRADASTECHNIKA. (Hiradastechnikai Tudomanyos Egyesulet) Budapest.  
Vol. 7, no. 1, Feb. 1956.

SOURCE: EEAL, Vol. 5, no. 7, July 1956.

LAJTHA, GY.

TECHNOLOGY

PERIODICAL: MAGYAR HIRADASTECHNIKA. Vol. 9, no. 2/3, June 1958

Lajtha, Gy. Negative impedance and stability of two-wire circuits. p. 63.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2,  
February 1959, Unclass.

RUSZNYAK I., LOWINGER S. & LAJTEA L. First Medical Clinic of the Peter Pazmany University, Budapest The factor in pernicious serum which inhibits the maturation of red blood cells Hungarica Acta Medica 1948, 1/1 (9-20) Tables 7

The authors cultured human bone marrow in Gey's solution. Folic acid has a direct cell-maturing effect, shown by the diminishing number of megaloblasts. On a medium containing placental serum, pernicious bone marrow explantate shown spontaneous maturation of red blood cells. Serum of healthy adults has the same effect. The serum of pernicious anaemia patients contains a factor inhibiting the maturation of red blood cells, the effect of which depends on the concentration. The diminution of the number of megaloblasts is much less pronounced in concentrated pernicious anaemia serum. Most of the megaloblasts do not form megalocytes, but develop further into macro- or normoblasts. The direct effect of folic acid is also observable in this serum, and likewise the direct action of liver extracts. In remission, the serum of the patients behaves much like that of normal individuals. There are two possibilities in the pathogenesis of pernicious anaemia; (a) The presence of a substance (toxin?) which prevents the maturation of red blood cells, with an insufficient amount of anti-anaemic factor to counterbalance it; (b) in consequence of a decrease in the anti-anaemic factor present in every serum, the inhibiting effect of metabolic products poisonous to cell activity predominates.

Balint - Budapest (Sec. V)

SO: Physiology Biochemistry and Pharmacology. Section II, Vol. 2, No. 9.

LAJTHA, L.  
CP

1H

Abolition of pyloric spasm by orally administered procaine solutions. G. Róka and L. G. Lajtha (Univ. Budapest). *Bud. Med. J.* 1950, 1, 1174-6. Opening of the pyloric valve in humans was not affected by passage of 20 ml. of 0.1 N HCl or NaHCO<sub>3</sub> into the stomach. Subcutaneous injection of 1 mg. adrenaline always resulted, after 10-30 min., in the valve opening without difficulty, but never caused normal closure of pyloric spasm. Atropine 0.5 g. intravenously had no effect on the normal pylorus, but caused opening of the spastic pylorus. Papaverine up to 0.2-0.3 g. intramuscularly had very little effect on the normal pylorus, but usually opened the spastic pylorus. Oral administration of 100 ml. of 1% procaine soln. over 4-5 min. always opened spastic pylorus and kept it open for several hrs.

LAJTONS, L. - Vol. 8, no. 1, Jan. 1955. - Magyar Energiagazdaság.

Some problems of the power economy in agriculture. p. 26.

New section in our periodical. p. 29.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955  
Uncl.

LAK, G.Ts., TULINA, M.P., redaktor; MOLODTSOVA, N.G., tekhnicheskiy  
redaktor.

[Diatomaceae quaternary deposits of western Karelia.] Diatomovye  
chetvertichnykh otlozhenii Zapadnoi Karelii. Moskva, Izd-vo  
Akademii nauk SSSR, 1954. 12 p. plates. (MIRA 8:3)  
(Karelia—Diatoms, Fossil)

LAK, G.TS.

[Diatomaceous quaternary deposits of western Karelia] Diatomo-  
vye chetvertichnykh otlozhenii Zapadnoi Karelii. Moskva, AN  
SSSR, 1954. 36 p.  
(MIRA 8:2D)

BISKE, G.S., starshiy nauchnyy sotrudnik. Prinimeli uchastiye: LAK, G.TS.,  
mladshiy nauchnyy sotrudnik; GORYUNOVA, N.N., SLODKOVICH, V.S.,  
prof., doktor geologo-mineral.nauk, nauchnyy red.; GENDZLEV,  
D.Z., red.; SHEVCHENKO, L.V., tekhn.red.

[Quaternary sediments and the geomorphology of Karelia]  
Chetvertichnye otlozheniya i geomorfologiya Karelii. Petro-  
zavodsk, Gos.izd-vo Karel'skoi ASSR, 1959. 307 p. (MIRA 12:12)  
(Karelia--Geology)

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4

BISKE, G.S.; GORYUNOVA, N.N.; LAK, G.TS.

Holocene in Karelia. Trudy Kar. fil. AN SSSR no.11:28-82 '59.  
(MIRA 13:2)

(Karelia--Geology, Stratigraphic)

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4"

BISKE, G.S.; LAK, G.TS.

Interglacial sediments in Karelia. Trudy Kar. fil. AN SSSR no.11:  
(MIRA 13:2)  
102-129 '59.  
(Karelia--Moraines)

LAK, G.TS.

Correlation of fossil and recent diatoms based on the correlation  
made in the Onega-Ladoga isthmus. Trudy Kar. fil. AN SSSR no.11:  
130-140 '59.  
(Karelia--Diatoms)

LAK, G.TS.

Diatoms in Quaternary sediments in Karelia. Trudy Kar. fil.  
AN SSSR no.11:141-179 '59. (MIRA 13:2)  
(Karelia--Diatoms)

LAK, G.TS.

Diatoms in lacustrine deposits of Karelia. Dokl. AN SSSR 148  
no. 1:170-171 Ja '63. (MIRA 16:2)

1. Institut geologii Karel'skogo filiala AN SSSR. Predstavлено  
академиком V.N. Sukachevym.  
(Karelia—Diatoms, Fossil)

LAK, H., Dr.; IOAN, S., dr.; BASARAB, A., dr.

Notes on a case of hyperthyroidism treated with serpasil.  
Med. int., Bucur. 3 no.7:1075-1077 Nov 56. (MLRA 9:11)

1. Lucrare efectuata in clinica medicala Spitalul "Brincovenesc"

I.M.F. Bucuresti.

(HYPERTHYROIDISM, therapy  
reserpine, in hypertensive patient)

(RESERPINE, ther. use  
hyperthyroidism with hypertension)

(HYPERTENSION, therapy  
reserpine, in hyperthyroidism)

L 2L826-65 EPA(s)-2/EWT(m)/EPP(c)/EPR/EWP(j)/T Po-1/Pr-1/Ps-1/Pt-10 AFWL  
RM/WH

ACCESSION NR: AP5001979

S/0020/64/159/006/1244/1246

42

B

AUTHOR: Aynbinder, S. B.; Laka, M. G.; Mayors, I. Yu.

TITLE: Effect of hydrostatic pressure on the deformation resistance  
and strength of polymers

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1244-1246

TOPIC TAGS: polymer strength, polymer property, hydrostatic pressure

ABSTRACT: The effect of hydrostatic pressure on properties of polymers such as poly(vinyl chloride), plexiglass, amino resin,<sup>15</sup> and ebonite has been studied. Compression and tensile tests at atmospheric and 2000 kg/cm<sup>2</sup> pressure showed that the hydrostatic pressure substantially increases the strength and Young's modulus of all indicated polymers, but has an insignificant effect on elongation, with the exception of amino resin, whose elongation increases from 22% under atmospheric pressure to 35% under a pressure of 2000 kg/cm<sup>2</sup>.

Card 1/2

L 24026-65

ACCESSION NR: AP5001979

In certain cases the hydrostatic pressure changes the character of fracture. In tensile tests, plexiglass and ebonite failed in a brittle manner at both atmospheric and 2000 kg/cm<sup>2</sup> pressure. However, in the first case the fracture surface was rough and in the second, smooth and perpendicular to the specimen axis. The hardness dropped as a result of deformation regardless of pressure. The ratio of hydrostatic pressure to the Young's modulus was 0.12 for poly(vinyl chloride), 0.097 for plexiglass, 0.116 for ebonite, and 0.05 for amino resin generally higher than that for metals, 0.05 max. Thus the strength potentials of polymers appear to be higher than those of metals.

Griz. art. has: 3 figures and 1 table.

ASSOCIATION: Institut mehaniki polimerov AN LatvSSR (Institute of Polymer Mechanics, AN LatvSSR)

SUBMITTED: 26 May 64

ENCL: 00

SUB CODE: OC, MT

NO REF Sov: 003

OTHER: 002

ATD PRESS: 3167

Cord 2/2

L-55047-65 EWT(m)/EPF(c)/EPR/EWP(j)/T P<sub>c</sub>-4/P<sub>r</sub>-4/P<sub>s</sub>-4 RPL NM/RM

ACCESSION NR: AP5011989

UR/0374/65/000/001/0065/0075  
678:539.4.01

37  
36

AUTHORS: Aynbinder, S. B. (Riga); Lake, M. G. (Riga); Mayore, I. Yu. (Riga) B

TITLE: Effect of hydrostatic pressure upon the mechanical properties of polymer materials

SOURCE: Mekhanika polimerov, no. 1, 1965, 65-75

TOPIC TAGS: hydrostatic pressure, polymer, tensile strength, modulus of elasticity

ABSTRACT: The effect of hydrostatic pressure on the tensile strength of polymethylmethacrylate, vinyl plastics, polystyrene, polycaprolactam, teflon, polyethylene, aminoplastics, K-17-2, VPK-1, and ebonite was determined. The experimental setup is shown in Fig. 1 on the Enclosure. The modulus of elasticity and the strength limit increase for all materials with increase in hydrostatic pressure. The modulus of elasticity for amorphous plastics and crystalline plastics increases almost linearly with pressure, increasing at a slightly lesser rate at higher pressures. For three-dimensional structural polymers or thermosetting plastics, the modulus of elasticity increases rapidly up to 500 kg/cm<sup>2</sup> and shows a much smaller pressure dependence for higher pressures. From the experimental

Card 1/4

L 55047-65

ACCESSION NR: AP5011989

From it is concluded that the increase in Young's modulus with increase in pressure is due to two reasons: decrease in the specific volume and finiteness of deformation. For thermosetting plastics, the initial rapid increase in Young's modulus is attributed in part to consolidation of the molecular structure. For crystalline and amorphous polymers,  $E$  may be calculated with sufficient accuracy for practical purposes by the expression

$$\frac{\Delta E}{E_0} = \frac{\sigma g}{E_0} f(v)$$

$$E = E_0 \left( 1 + \frac{\sigma g}{E_0} f(v) \right),$$

where  $E_0$  is the initial value of Young's modulus,  $g$  is the hydrostatic pressure in  $\text{kg}/\text{cm}^2$ , and  $f(v)$  is an empirical function of Poisson's coefficient  $v$ . For the high elasticity region, the elastic limit for these types of polymer may be calculated by

$$\sigma_e = \sigma_0 \left[ 1 + c \frac{\sigma g}{E_0} \right],$$

where  $\sigma_e$  is the elastic limit at the hydrostatic pressure  $\sigma_g$ ,  $\sigma_0$  the initial elastic limit,  $E_0$  initial value of Young's modulus and  $c$  an experimental constant.

Card 2/4

L-55047-65

ACCESSION NR: AP5011989

Orig. art. has: 2 tables, 9 graphs, and 7 equations.

ASSOCIATION: none

SUBMITTED: 02Sep64

ENCL: 01

SUB CODE: MT, ME

NO REF Sov: 006

OTHER: 004

Card 3/4

L 55047-65  
ACCESSION NR. AP5011989

ENCLOSURE: 01

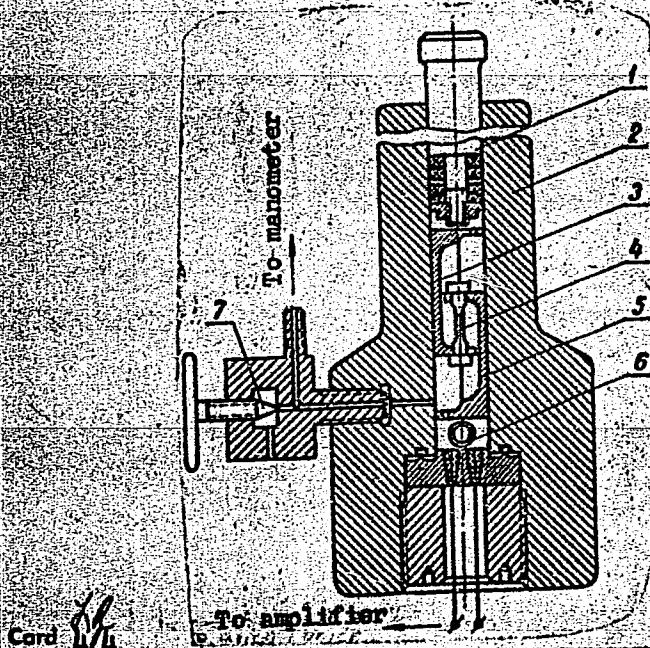


Fig. 1. Schematic  
of the high pressure  
chamber used in the  
determination of the  
 $\sigma|E|$  curve as a  
function of the  
hydrostatic pressure

L 00788-67 EWP(j)/EWT(m)/T IJP(c) RM/WW

ACC NR: AP6023393

SOURCE CODE: UR/0374/66/000/003/0337/0349

AUTHOR: Aynbinder, S. B.; Laka, M. G.35  
BORG: Institute of Mechanics of Polymers, Academy of Sciences Latvian SSR,  
Riga (Institut mekhaniki polimerov Akademii nauk Latviyskoy SSR)TITLE: Hardness of polymer materialsSOURCE: Mekhanika polimerov, no. 3, 1966, 337-349TOPIC TAGS: hardness, polymer

ABSTRACT: Hardness of polymer materials must be estimated by the depth or diameter of nonrestored indentation. The ratio of the diameter of indentation and the diameter of the ball must be larger than 0.8 when balls are used as indentors. Using a pyramid or cone, the angle at the apex must be 60—65°. The hardness of polymer materials was studied, and the relationship between the hardness and the strength and elastic properties was established. Orig. art. has: 9 figures, 12 formulas, and 2 tables. [Based on authors' abstract]

[NT]

SUB CODE: 11/ SUBM DATE: 31Dec65/ ORIG REF: 013/ OTH REF: 002/

nd  
Cord 1/1

UDC: 678.539.53.541.6

LAKATKIN, V. V., Cand. Agri. Sci. (d8ss) "Comparative Evaluation  
of Microclimate of Sites for Cage Care of Chickens," Moscow, 1961,  
23 pp. (Moscow Veter. Acad.) 200 copites (KL Supp 12-61, 280).

LAKATOS, A.

- "Experiences of the Wilhelm Pieck Factory with innovations." p. 7. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "A conference of metallurgists of Diosgyor." p. 7. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "The 550-hour movement at Diosgyor." p. 7. (Ujítók Lapja, Vol. 5, no. 4, Feb 43, Budapest)
- "The Lang Factory fulfills its plan through innovations." p. 8. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Innovators of the Model Machine Factory have great success." p. 8. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "The innovators of the April 4 Machine Factory should make preparations for April 4!" p. 9. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Innovation contest between machine factories." p. 9. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Contest at the Motor Foundry." p. 9. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Innovations in connection with the Plan fulfillment at the Hungarian Steelworks." p. 10. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Application of innovations in the Steel and Pipe Factory is urgent." p. 10. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "Work pledges in the Machine Tool Factory of Kobanya." p. 11. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "The Machine Factory of the Chemical Industry should fulfill its plan." p. 11. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)
- "News of the innovator exhibition." p. 12. (Ujítók Lapja, Vol. 5, no. 4, Feb 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl

LAKATOS, A.

"Work plan for the development of the movement." (p. 13) UJITOK LAPJA (Orszagos  
Talalmanyi Hivata) Budapest. Vol. 6, no. 6, Mar. 1954.

SO: EA T European Accessions List, Vol 3, No 8, Aug 1954.

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4

LAKATOS, Ad., dr. medic radiolog

The electronic screen. St si Teh Buc 15 no.4:32-33 Ap '63.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4"

LAKATOS, Adalbert, dr. medic radiolog (Cluj)

Television and health. St si Teh Buc 15 no.10:5 0 '63.

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4

LAKATOS, Adalbert, Jr.

Cranial defectoscopy? St. si Teh Bac 17 no.2:26-27 F 165.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4"

LAKATOS, Bela

Example to be followed; the initiative of some trade unions in a more accurate determination of the objectives of work competitions. Munka 5 no.3:26-29 Mr '55.

1. Szakszervezetek Orszagos Tanacsa Termelesi Osztalya vezetoje.

LAKATOS, Bela, dr.

Some technical and economic problems of the cotton industry print collections. Magy textil 13 no.3:111-114 Mr '61.

"APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4

LAKATOS, Bela, dr.

Some problems of management. Magy textil 14 no.9:427-428  
S '62.

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R000928420020-4"

LaKatos, B.

5

## H U N G .

A new form of the periodic table and periodic functions.  
Z. O. Szafr and B. Lakatos (Univ. Szeged). *Acta Chim. Acad. Sci. Hung.*, 5, 129-50 (1964) (in English).—The periodic table of Mendeleev was combined with that of Smith and Stoner and gave simple but theoretically correct periodic system based on the arrangement of electrons filling up the s-, p-, d-, and f-type orbits. By rearrangement of the long periodic table so that inert gases occupy a central column, the elements possessing incomplete s-orbits can be placed to the right, and the elements whose s-orbits are complete, to the left. The lanthanides and actinides, however, still require separate consideration. The advantages lie in the unequivocal definition of (1) horizontal and vertical relations, (2) the no. of unpaired electrons, and (3) the variation of electroneg. and electroneg. characteristics. The relation between electronic structure of atoms and the configuration of inert gases is shown clearly, and phys. properties are pointed out as periodic functions of the fine structure of electrons rather than of the at. no.

Philip S. Baker

XRAYATUS 6

The volume of sediments obtained by centrifuging precipitates. B. Lakatos. Magyar Kémikusok Lapja 9, 377-8 (1954); Magyar Kémiai Folyóirat 60, 333-35 (1954); Hung. Tech. Akad. 7, No. 3, 1 (1955). Factors detg. the vol. of the sediments depend on the conditions prevailing during the pptn. and centrifugal sepn. of the ppt. The conditions of pptn. exert their effect on the vol. of the sediment primarily by affecting the dispersion and specific adhesion of the ppt., and secondly, by influencing its morphologic properties. The vol. changes in sediments recovered by the centrifugal sepn. of a BaSO<sub>4</sub> model ppt., by using const. amts. of sulfate, was investigated to establish the above influencing factors of pptn. Under isothermal conditions, provided the influence of the adhesive forces on the vol. of the sediment was

negligible and within a well-defined velocity range, the vol. of the BaSO<sub>4</sub> produced varied proportionally to the addn. rate of the pptg. agent. When this precipitant was added at a const. rate and the temp. was lowered, the vol. of the sediment diminished until a min. was reached at 0°. On further coolings the vol. of the sediment increased. No significant changes were observed by varying the method of addn. of the precipitant, i.e. when "direct" or "reverse" pptn. was applied. On the contrary, the interaction of reagents in equiv. units caused a significant increase in vol. which is explained by the increase in adhesive forces. When the H-ion concn. in the soln. was increased, the vol. of the sediment decreased. The vol. of the sediment and the dispersion curve passed through a min., depending on the concn. of the soln. in which the pptn. occurred. The degree of dispersion was also increased by the addn. of substances reducing the poly. Additives such as NaCl and NH<sub>4</sub>Cl diminished the vol. of the sediment, whereas the action of others, e.g. FeCl<sub>3</sub> and saponins, augmented it. Colloid chemistry may serve as a basis for the explanation of the observed phenomena.

*Lakatos, Bela**6  
g  
Pig  
Clear*

✓ "Transition Metal Contraction and Double Contraction."  
Bd. Lakatos, *Nature*, 1954, 11, (15), 355-356. [In English]. It has been shown that the anomalous "jump" in phys. and chem. properties shown by the first members of the major groups of the Periodic Table is absent when the property values are plotted as a function of the principal quantum no.; the values for the first, third, and fourth elements then lie on a straight line. The "transition metal contraction" (δ contraction) accounts for the compactness of the electron shell in the third elements. In later groups this contraction is increasingly offset by mutual repulsion of electrons. Geochim., the isomorphous occurrence of the metals of the Pt group can be interpreted in the light of this contraction. It is the cause of the similarity of ionic radii of the second and third members and accounts for some hitherto unexplained isomorphisms. The metallic radii of Cu, Zn, and Ga are thus < those of Na, Mg, and Al, but the ionic radii are large, as the +ve nucleus contracts the less compact shell to a greater extent. In the sixth period the "transition metalloid" and "lanthanide" contraction interfere; the max. effect of the "double contraction" can be observed only after complete closure of the 5d orbital in the case of Au. It is considered that the reversal in property trends from Ag to Au must be effected by the double contraction and not solely, as has been believed, by the lanthanide contraction.

-S. V. R.

*Row  
PK  
OMA*

LAKATOS, BELA

2

The volume of sediment of centrifuged precipitate. II.  
The effect of the different precipitation conditions on the  
volume of centrifuged barium sulfate. Bela Lakatos,  
Magyar Akad. Folyóirat 60: 853-85 (1951); ~~Acta Phys. Hung.~~ 14: 177-181,  
1934. — Expts. were made to establish the dependence  
of vol. of the centrifuged  $\text{BaSO}_4$ , ppt. on the different ptnm.  
conditions. In an isothermal case, the vol. and dispersity  
of the sediment of the  $\text{BaSO}_4$  formed are proportional to the  
rate of addn. of the precipitant. This effect is similar to the  
one obtained at different temps. in the temp. range be-  
tween 0° and the b.p., further in case of weakly acidic solns.  
and of additives, up to a certain concn. In case of const.  
rate of precipitant addn. the vol. and dispersity of the  
sediment decrease with increase in temp. to a min. value  
(60°), whereas on further temp. decrease they increase  
continuously. During the course of addn. of precipitant,  
shaking and much stirring increase the vol. of the sediment.  
The direct and reverse methods of adding the precipitant  
do not affect the result, but the reaction of equiv. quanti-  
ties according to Andreesen results in a considerable in-  
crease in vol. of the sediment. The increase in the  $\text{H}^+$   
concn. of the soln. to be pptd. and the vol. and dispersity  
of the sediment show min. curves. The material quality is  
responsible also for the vol. of the sediment. In general,  
substances with a poly.-decreasing effect lead to a consider-  
able increase in the vol. of the sediment. Additives have  
different effects. Some of them decrease the vol. of sedi-  
ment, whereas others increase it, owing to coagulation and ad-  
sorption.

Walter Wagner

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LAKATOS, R.

✓ Apparent volume of solid phase of centrifuged precipitate. II.  
Effect of conditions of precipitation on apparent volume of centrifuged  
barium sulphate III. B. Lakatos (*Acta chim. hung.*, 1955, 7, 259—  
274).—Experiments which aim to establish the  
dependence of the apparent vol. of centrifuged precipitates of  
 $\text{BaSO}_4$  produced by different conditions of pptn. It is shown that  
in an isothermal case, and under conditions where the effect of  
adhesion on the apparent vol. of ppt. is negligible, the apparent vol.  
of centrifuged ppt. of  $\text{BaSO}_4$  and its degree of dispersion are propor-  
tional to the rate of addition of precipitant. At a steady rate of  
addition of precipitant, the apparent vol. of ppt. and degree of  
dispersion diminish with increase in temp. to a min. at  $60^\circ$  and then  
rise again up to  $100^\circ$ . An increase of the pH of the solution reduced  
the apparent vol. and degree of dispersion of the precipitate.

C. A. SLATER.

Chem 1

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PM

**Periodic compound**  
**Atom Size.** The periodicity in relative size of atoms is due to the periodic variation of the properties of the elements. The variation of these properties from period to period within a group is attributed to the transition metal and lanthanide contractions. J. R. Bridge

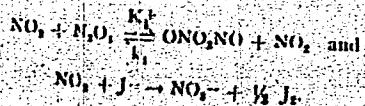
**APPROVED FOR RELEASE: 06/20/2000**

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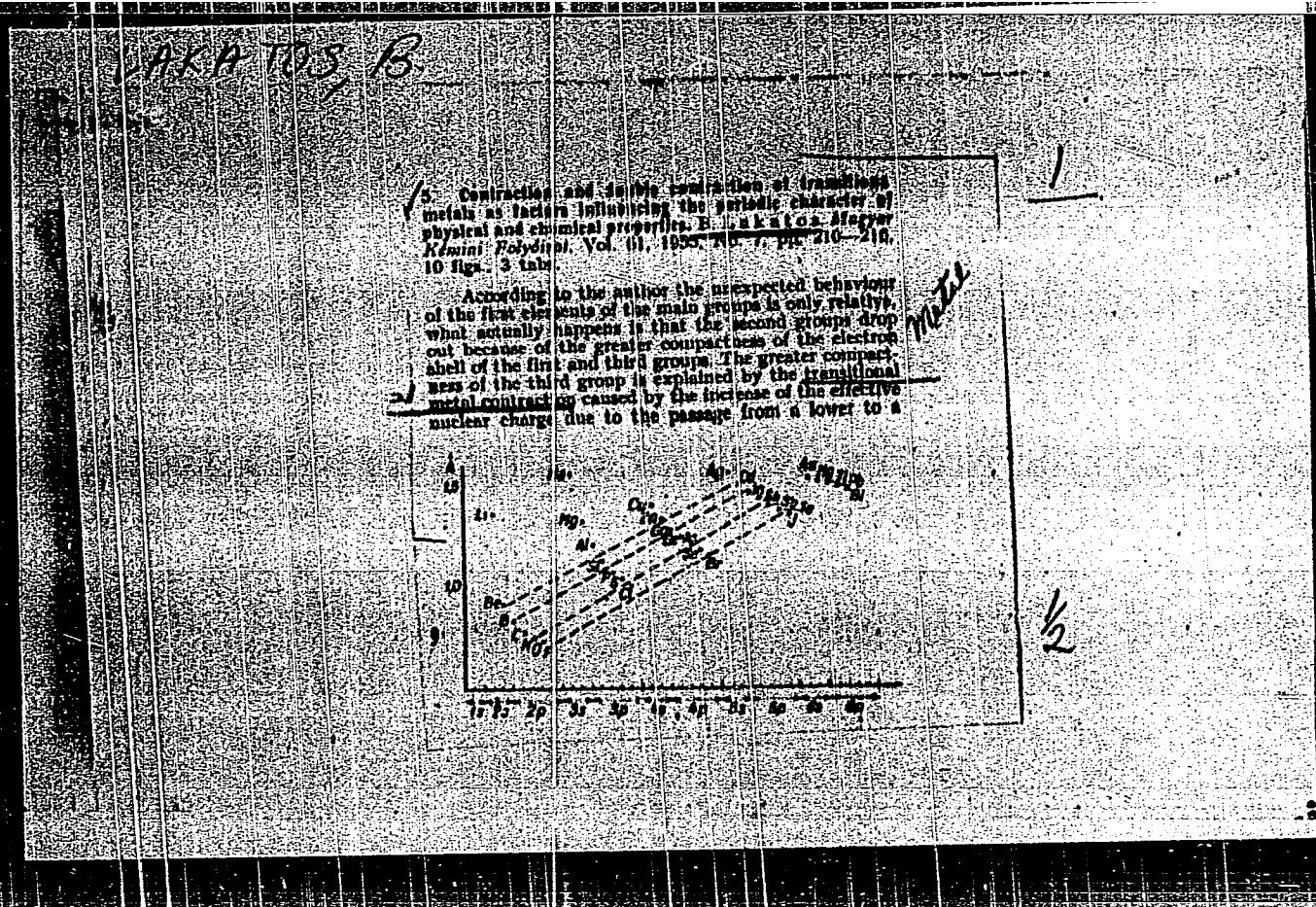
L-26-105, 10

38. Structure and reaction of the dinitrogen tetroxide molecule — L. Szabó, I. Barth, B. Lakatos  
*(Magyar Kémiai Folyóirat — Vol. 61, 1955, No. 3, pp. 161—176, 5 figs., 10 tabs.)*

CH The reaction between dinitrogen tetroxide molecules and iodide ions as a function of the iodide ion concentration, temperature and pressure was investigated. Based upon the experimental findings it was concluded that besides the well-known symmetric O<sub>2</sub>N<sup>+</sup>NO<sub>2</sub><sup>-</sup> molecule and its thermally dissociated fragment NO<sub>2</sub>, a dinitrogen tetroxide molecule of different structure must be present. The structural, kinetic and energetic consideration justified the assumption that the structure of this unknown modification is identical with the ring-type tetroxide molecule proposed by Longuet-Higgins. The other alternative structure, i.e. the nitroso-nitrate, which might be taken into account for the building up of the tetroxide ring, can only be considered a transient stage brought about in the course of the reaction since due to the action of heteropolar or strongly polar reactants the ring molecule yields by way of nitrosoyl nitrate nitrosoyl and nitrate ions. Recombination of these ions produces nitrosoyl nitrate as intermediate followed by ring closure yielding the Longuet-Higgins type molecule as end product. The results obtained by the kinetic study of the reaction led to the conclusion that the nitrogen dioxide dissociated from the dinitrogen tetroxide molecule determines the overall velocity of the whole process by the following two stages:



PM



Lakatos, B.

higher atomic number. This contraction elucidates many hitherto unexplained isomorphous phenomena. The contraction of transitional metals exerts some effect not only on the third but on the fourth, fifth and sixth elements of the main groups as well. The combined effect of this contraction and of the Goldschmidt lanthanide contraction explains the particular position of gold and the deviation of the characteristics of the elements following gold, that of the members of the main groups from the linear relation as observed in the case of the first, third and fourth members of the main group.

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LAKATOS, BELA

The structure and reactions of dinitrogen tetroxide.  
Zoltán G. Szabó, Lajos G. Barthol, and László Lakatos  
Univ. Szeged, Hung. J. Chem. Soc. 1950, 14, 51-55.  
The reaction between  $N_2O_4$  and I ion shows that in addn. to  
symmetrical  $Q_4N_2NO_4$  and its monomer, there is also present  
a tetroxide having the ring structure suggested by Longuet-  
Higgins (C.A. 38, 5741<sup>a</sup>). Equilibrium equations are given  
for the reactions among the types of ions. Equations for  
reaction rates with nitrosonium ion intermediates are  
discussed.

Lester D. Shubin

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LAKATOS, BELA

HUNGARY / Physical Chomistry. Thormodynamios. Thormochemistry. B-8  
Equilibria. Physical-Chemical Analysis. Phaso  
Transitions.

Abs Jour : Ref Zhur - Khim., No 10, 1958, 31641

Author : Bola Lakatos  
Inst : Academy of Scioncos of Hungary  
Title : Periodicity of Thermodynamic Propertios of Chomical  
Elements.

Orig Pub : Magyar tud. akad. Kom. tud. oszt. kozl., 1956, 7, No 2,  
119-140.

Abstract : No abstract.

Card 1/1

Lakatos, B.

37. Investigations on the volume of centrifuged precipitates. III. A rapid method for the estimation of sulphate measuring the volume of the centrifuged barium sulphite precipitate. A. Tóth, B. Lakatos, M. Mayer. Kémiai Folyoirat Vol. 61, 1955, No. 6, pp. 39-245. 7 figs., 7 tabs.

Experiments were carried out to determine the effect of different conditions of precipitation on the volume of the centrifuged barium sulphate precipitates — selected as model substance — by using identical amounts of sulphate. Based upon the systematic investigation of the conditions the following procedure was recommended for the estimation of sulphate: 1.5 ml of a 0.1 N hydrochloric acid solution and 1.2 ml of 25% ammonium chloride solution were added to a sample containing 5 to 35 mg sulphate ions and subsequently 8 ml of a 1% barium chloride solution was introduced by drops at 85 °C in exactly 2 minutes 40 seconds. After cooling the solution was transferred into a centrifuge tube of 25 to 30 ml capacity provided with a 50 mm long, 1.2 mm i.d. capillary tube graduated in mm. The solution was centrifuged finally at 3000 rpm for 5 minutes. The volume of the precipitate was read directly on the millimeter scale and the sulphate content was computed. Mean error of the method was  $\pm 2\%$  and one parallel determination took only 5 minutes. The method proved to be valuable for the determination of sulphate in natural waters, irrigation and ground waters.

3

New periodic functions. III. Mathematical approximation of the periodic functions of the S and P fields. Mihály Lakatos, Dezső Király, and Jenö Bayer. (Univ. Szeged, Hungary). Magyar Kem. Folyóirat 62, 119-230 (1950); cf. C.A. 47, 9072; 49, 8640g.—In continuation of previous work a math. function was established for the values of the melting point, boiling point, and heat of sublimation for the elements of the S and P fields. The functions gave good approximations to the exptl. values. The parameters of the curve were detd. by the method of least squares of deviations.

Saul Patel